

1 CLAIMS:

2 I claim:

3       1. A composition suitable for use in the manufacture of construction board comprising:

4           a dry powder ~~mineral substrate~~ selected from the group of minerals consisting of calcium

5 sulfate, perlite, and combinations thereof; and

6           a synthetic binder, said synthetic binder comprising ~~starch~~ a boron source, and a blend of

7           a ~~first polymer~~ and an amino resin, said first polymer being selected from the group consisting of

8 polyvinyl acetate and polyvinyl alcohol.

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10       2. The composition of claim 1, wherein said amino resin is selected from the group

11           consisting of aniline formaldehyde resin, melamine formaldehyde resin, urea-formaldehyde

12           resin, and urea-melamine formaldehyde resin.

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14       3. The composition of claim 1, wherein said first polymer and said amino resin are

15           present in said composition in proportion to one another ranging from 40:60 to 60:40.

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17       4. The composition of claim 1, wherein said amino resin comprises an aqueous solution

18           having from 55% to 70% solids.

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20       5. The composition of claim 1, wherein said amino resin is present in said composition in

21           an amount of about 0.5% to about 1.5% of the total wet weight of the slurry, and said first

22           polymer is present in said composition in an amount of about 0.3% to about 1.5% of the total wet

23           weight of the slurry.